

CLAIMS

What is claimed is:

1. A device for encoding and encrypting data, said device
 5 comprising:
 a segmenter adapted to receive said data and segment at least a
 portion of said data into regions;
 a scalable encoder coupled to said segmenter, said scalable encoder
 adapted to scalably encode at least one of said regions into scalably encoded
 10 data; and
 a progressive encrypter coupled to said scalable encoder, said
 progressive encrypter adapted to progressively encrypt at least a portion of
 said scalably encoded data into progressively encrypted scalably encoded
 15 data.
2. The device of Claim 1 wherein said device is coupled to a
 packetizer, wherein said packetizer is adapted to receive said progressively
 encrypted scalably encoded data in real time as said progressively encrypted
 scalably encoded data are output from said progressive encrypter.
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3. The device of Claim 1 comprising:
 a storage unit coupled to said progressive encrypter, said storage unit
 adapted to store said progressively encrypted scalably encoded data.
- 25 4. The device of Claim 3 wherein said device is coupled to a
 packetizer, wherein said packetizer is adapted to receive at least a portion of
 said progressively encrypted scalably encoded data stored in said storage
 unit.
- 30 5. The device of Claim 1 wherein said data are selected from the
 group consisting of: video data, audio data, image data, graphic data, and
 web page data.
- 35 6. The device of Claim 1 wherein said segmenter is adapted to
 receive prediction error video data.
7. The device of Claim 1 wherein said segmenter is adapted to
 segment data into rectangular regions.

8. The device of Claim 1 wherein said segmenter is adapted to segment data into non-rectangular regions.

9. The device of Claim 1 wherein said segmenter is adapted to
5 segment data into overlapping regions.

10. The device of Claim 1 comprising:
a video prediction unit coupled to said segmenter, said video prediction
unit adapted to generate prediction error video data.
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11. The device of Claim 1 wherein said scalable encoder is adapted
to encode said at least one of said regions into scalable data and into header
data, wherein said header data provide information corresponding to said
scalable data.
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12. The device of Claim 11 wherein said progressive encrypter is
adapted to encrypt said header data.

13. The device of Claim 11 wherein said header data comprise
20 information allowing a transcoder to transcode said progressively encrypted
scalably encoded data without decrypting and decoding said progressively
encrypted scalably encoded data.

14. A method for encoding and encrypting data, said method
25 comprising:
a) receiving said data;
b) segmenting at least a portion of said data into regions;
c) encoding at least one of said regions into scalably encoded data;
and
30 d) encrypting at least a portion of said scalably encoded data into
progressively encrypted scalably encoded data.

15. The method of Claim 14 wherein a packetizer receives said
progressively encrypted scalably encoded data in real time.
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16. The method of Claim 14 comprising:
e) storing said progressively encrypted scalably encoded data in a
storage unit.

17. The method of Claim 16 wherein a packetizer receives at least a portion of said progressively encrypted scalably encoded data from said storage unit.

5 18. The method of Claim 14 wherein said data are selected from the group consisting of: video data, audio data, image data, graphic data, and web page data.

10 19. The method of Claim 14 wherein said step a) further comprises: receiving prediction error video data.

20. The method of Claim 14 wherein said step b) comprises: segmenting said data into rectangular regions.

15 21. The method of Claim 14 wherein said step b) comprises: segmenting said data into non-rectangular regions.

20 22. The method of Claim 14 wherein said step b) comprises: segmenting said data into overlapping regions.

23. The method of Claim 14 further comprising: generating prediction error video data.

25 24. The method of Claim 14 wherein said step c) comprises: encoding said at least one of said regions into scalable data and into header data, wherein said header data provide information corresponding to said scalable data.

30 25. The method of Claim 24 comprising: encrypting said header data.

35 26. The method of Claim 24 wherein said header data comprise information allowing a transcoder to transcode said progressively encrypted scalably encoded data without decrypting and decoding said progressively encrypted scalably encoded data.

27. A computer readable medium having computer readable code stored thereon for causing a device to perform a method for encoding and encrypting data, said method comprising:

- a) receiving said data;
 - b) segmenting at least a portion of said data into regions;
 - c) encoding at least one of said regions into scalably encoded data;
- and
- d) encrypting at least a portion of said scalably encoded data into progressively encrypted scalably encoded data.

28. The computer readable medium of Claim 27 wherein a packetizer receives said progressively encrypted scalably encoded data in real time.

29. The computer readable medium of Claim 27 wherein said method comprises:

- e) storing said progressively encrypted scalably encoded data in a storage unit.

30. The computer readable medium of Claim 29 wherein a packetizer receives at least a portion of said progressively encrypted scalably encoded data from said storage unit.

31. The computer readable medium of Claim 27 wherein said data are selected from the group consisting of: video data, audio data, image data, graphic data, and web page data.

32. The computer readable medium of Claim 27 wherein said step a) further comprises:

- receiving prediction error video data.

33. The computer readable medium of Claim 27 wherein said step b) comprises:

- segmenting said data into rectangular regions.

34. The computer readable medium of Claim 27 wherein said step b) comprises:

- segmenting said data into non-rectangular regions.

35. The computer readable medium of Claim 27 wherein said step b) comprises:

- segmenting said data into overlapping regions.

36. The computer readable medium of Claim 27 wherein said method further comprises:
generating prediction error video data.

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37. The computer readable medium of Claim 27 wherein said step c) comprises:

encoding said at least one of said regions into scalable data and into header data, wherein said header data provide information corresponding to said scalable data.

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38. The computer readable medium of Claim 37 wherein said method comprises:

encrypting said header data.

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39. The computer readable medium of Claim 37 wherein said header data comprise information allowing a transcoder to transcode said progressively encrypted scalably encoded data without decrypting and decoding said progressively encrypted scalably encoded data.

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